AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A computer program device readable by a machine, tangibly embodying a program of instructions executable by the machine for generating sub-codes of <u>ordered</u> sub-code sets, to perform method steps of:

generating <u>ordered</u> sub-code sets with given code rates, each sub-code belonging to one <u>ordered</u> sub-code set having the same code rate and each <u>ordered</u> sub-code set having a different code rate;

rearranging an order of the sub-codes of [[a]] <u>an ordered</u> sub-code set with a same or different code rate that is to be used after a sub-code with a predetermined code rate according to a priority of the sub-codes; and

transmitting data using a sub-code in [[a]] <u>an ordered</u> sub-code set.

2. (Previously Presented) The device of claim 1, wherein the sub-code is represented by a matrix with elements representing puncturing and repetition positions.

3. (Currently Amended) The device of claim 1, wherein the rearranging step comprises the steps of:

generating new <u>ordered</u> sub-code sets, a representative matrix for each sub-code in each new <u>ordered</u> sub-code set having as many columns as the least common multiple of the numbers of columns of each sub-code in the <u>ordered</u> sub-code sets; and

determining priority of the matrixes of sub-codes in each new <u>ordered</u> sub-code set so that a matrix generated by combining matrixes from two of the new <u>ordered</u> sub-code sets has a quasi-complementary turbo code (QCTC) characteristic, a higher priority assigned to a more desirable QCTC characteristic, and rearranging the matrixes in each new sub-code according to the priority, wherein the QCTC characteristic are the elements of the matrix that have a uniform distribution of repetition and puncturing.

4. (Cancelled)

5. (Currently Amended) A computer program device readable by a machine, tangibly embodying a program of instructions executable by the machine for rearranging matrixes of sub-codes of ordered sub-code sets, to perform method steps of:

generating ordered sub-code sets corresponding to a plurality of system code rates, each sub-code of the ordered sub-code set represented in a matrix format with elements representing repetition and puncturing positions;

generating new sub-code sets, a matrix of each sub-code in a new ordered sub-code set having as many columns as a least common multiple of the numbers of columns of sub-codes in the ordered sub-code sets;

determining priority of the matrixes of sub-codes in each new ordered sub-code set so that a matrix generated by combining matrixes from two of the new ordered sub-code sets has a quasi-complementary turbo code (QCTC) characteristic, a higher priority assigned to a more desirable QCTC characteristic, wherein the QCTC characteristic are the elements of the matrix that have a uniform distribution of repetition and puncturing;

~~rearranging the matrixes in each new sub-code according to the priority;~~

rearranging the matrixes in each new sub-code in the ordered sub-code sets with a same or different code rate that is to be used after a sub-code with a predetermined code rate according to the priority; and

transmitting data using a sub-code in [[a]] an ordered sub-code set.

6. (Currently Amended) A computer program device readable by a machine, tangibly embodying a program of instructions executable by the machine for transmitting data using sub-codes of ordered sub-code sets, to perform method steps of:

generating ordered sub-code sets with given code rates;

~~rearranging an order of the sub-codes in the sub-code sets according to a priority of the sub-codes and~~

rearranging an order of the sub-codes in the ordered sub-code sets with a same or different code rate that is to be used after a sub-code with a predetermined code rate according to a priority of the sub-codes;

storing the rearranged sub-codes;

selecting [[a]] an ordered sub-code set with a code rate determined for transmission; and transmitting data using a sub-code in the selected ordered sub-code set.

7. (Currently Amended) The device of claim 6, wherein the rearranging step comprises the steps of:

generating new ordered sub-code sets, a representative matrix of each sub-code of the new ordered sub-code set having as many columns as the least common multiple of numbers of the columns of each sub-codes in the ordered sub-code sets;

determining priority of the matrixes of sub-codes in each new ordered sub-code set so that a matrix generated by combining matrixes from two of the new ordered sub-code sets has a QCTC characteristic, a higher priority assigned to a more desirable QCTC characteristic, wherein the QCTC characteristic are the elements of the matrix that have a uniform distribution of repetition and puncturing; and

rearranging the matrixes in each new sub-code in the ordered sub-code sets with a same or different code rate that is to be used after a sub-code with a predetermined code rate, according to the priority.

8 – 20. (Cancelled)